

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td style="width: 33%;"> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </td> <td style="width: 33%;"> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </td> <td style="width: 33%;"> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </td> <td style="width: 33%;"> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </td> </tr> </table>	Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>
Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>			

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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Work Order ID 122477

122477

Page 2

Tuesday, July 22, 2014 8:37:42 AM

Item ID: D4471-041 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Mid Rib Assembly, LH
Start Date: 7/21/14 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 7/21/14 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Chemical Conversion Coat per QSI005 4.1	0.00				2	14.09.08		
130									
HandFinish	Memo	0.00							
Hand Finishing									
131	QC7-Inspect Chemical Conversion Coat	0.00				1	14.09.15	(X2)	
131									
QC	Memo	0.00							
Quality Control									
180		0.00				1			14.09.15
180									
SprayPaint	Memo	0.00							
Spray Painting	powder coat gloss grey as per DART QSI005 4.1								
	MASK ALL HOLES								

14.09.15

Prime as per darg tempo grey
Batch: M12892F

DQA: _____ Date: _____



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Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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Page 3

9-8c 14-7-19

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>
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Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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Work Order ID 122477

Tuesday, July 22, 2014 8:37:42 AM

122477

Page 4

Item ID: D4471-041 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Mid Rib Assembly, LH
Start Date: 7/21/14 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 7/21/14 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
200	Identify as per dwg & Stock Location <i>5236</i>	0.00				<i>2X</i>		<i>14-9-19</i>	
200	Packaging	Memo							
Packaging									
210	QC21- Final Inspection - Work Order Release	0.00							
210	QC	Memo				<i>MCS</i>		<i>14-9-19</i>	
Quality Control									

DAS
26
9-89

14-a-1a

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>
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Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
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Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
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FAULT CATEGORY

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Picklist Print

Tuesday, July 22, 2014 8:37:42 AM

Page 1

Work Order ID: 122477

122477

Parent Item: D4471-041

D4471-041

Parent Item Name: Mid Rib Assembly, LH

Start Date: 7/21/14

Required Date: 7/21/14

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP TREV:A NEW ISSUE 12-02-01 JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D4471-1P		Purchased	No				Each	0.0000					
----------	--	-----------	----	--	--	--	------	--------	--	--	--	--	--

D4471-1P

Mid Rib, LH

M6061T6B1.000X04.00 0		Purchased	No				f	103.0490		2			
--------------------------	--	-----------	----	--	--	--	---	----------	--	---	--	--	--

M6061T6B1 000X04 000

6061-T6 Bar 1.00 x 4.00

Location	Loc Qty	Loc Code
MAT003	103.049	
124681	23.7	
M126160	10	
M127797	20.349	
M128980	1	
M129167	48	

MS20605-AD3W4		Purchased	No				Each	50.0000					
---------------	--	-----------	----	--	--	--	------	---------	--	--	--	--	--

MS20605-AD3W4

Blind Rivet

Location	Loc Qty	Loc Code
ST310	50	
125654	50	

MS21069L08		Purchased	No				Each	1,800.000					
------------	--	-----------	----	--	--	--	------	-----------	--	--	--	--	--

MS21069L 08

ANCHOR NUT

Location	Loc Qty	Loc Code
ST304	1800	
123522	1800	

**

**

**

**

12
122477
B 14/09/10

14/10/08/25
N/A mat supply by
Archer.

48
14/09/18
DAS
36
9-89

8
24
14/09/18
DAS
36
9-89

4

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

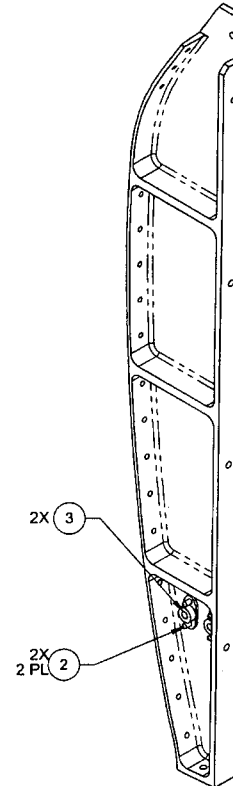
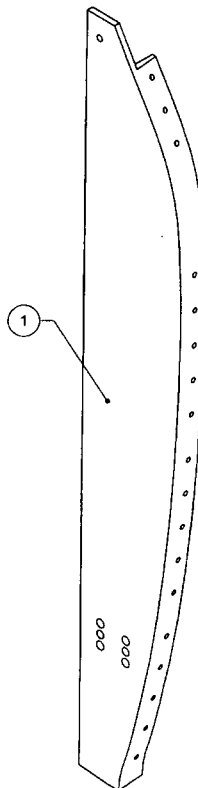
Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>
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Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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ITEM	QTY	P/N	DESCRIPTION
	X	D4471-041	MID RIB ASSY (LH)
1	1	D4471-1	MID RIB (LH)
2	4	MS20605AD3W4	CSK BLIND RIVET
3	2	MS21069L08	NUTPLATE



D4471-041 MID RIB ASSY (LH)

NOTES:

- 1) MATERIAL -1: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR
PER QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)
OR QQ-A-200/8 OR AMS-QQ-A-200/8 (OR AMS 4160)
OR ASTM B211 OR ASTM B221
REF DART SPEC M6061T6B
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME TEMPO GREY (4.2.1.3.2) PER DART QSI 005 4.2
(PRIOR TO HARDWARE INSTALLATION)
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.60 lbs
- 8) ALL NON DIMENSIONED FEATURES PER CAD FILE "D4471-1-REV.B.STP"
- 9) RAW MATERIAL SURFACE FINISH SUFFICIENT FOR THIS PART
(NOT NECESSARY TO FACE MATERIAL).

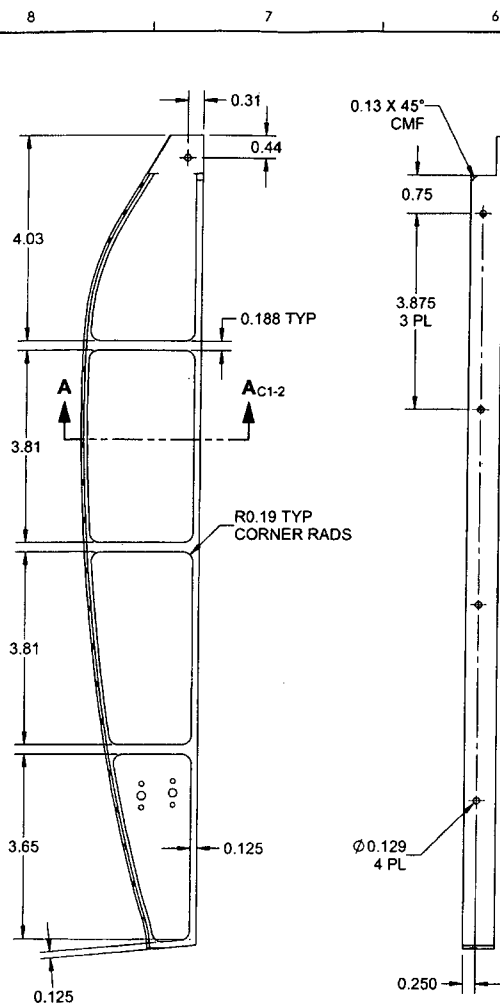
SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

NO 122437 MLC

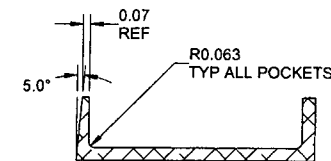
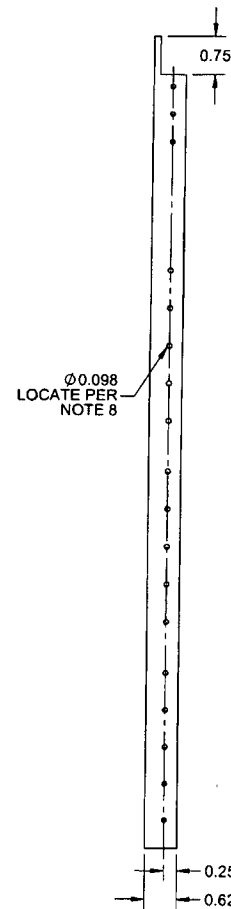
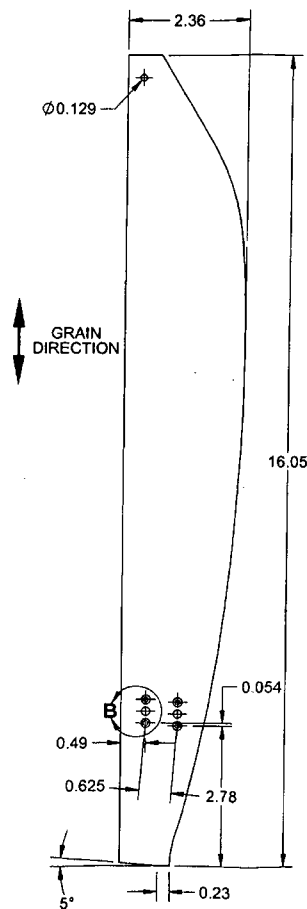
140722

RELEASED
2012-09-27
WJP

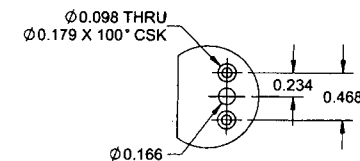
B	ADDED -042 & -2 (RH CONFIGURATION). PRIMER NOTE ADDED. NUTPLATE RIVET WAS MS20426AD3-4.	AJS	12.09.10
A	NEW ISSUE	AJS	12.03.05
REV.	DESCRIPTION	BY	DATE
DESIGN	AJS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED	AP	DRAWING NO.	REV. B
MFG. APPR.	AP	D4471	SHEET 1 OF 4
APPROVED	AP	TITLE	SCALE
DE APPR.	AP	MID RIB ASSEMBLY	NTS
DATE	12.09.10	COPYRIGHT © 2012 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	



D4471-1 MID RIB (LH)



SECTION A-A C7-2
(SCALE 2X)

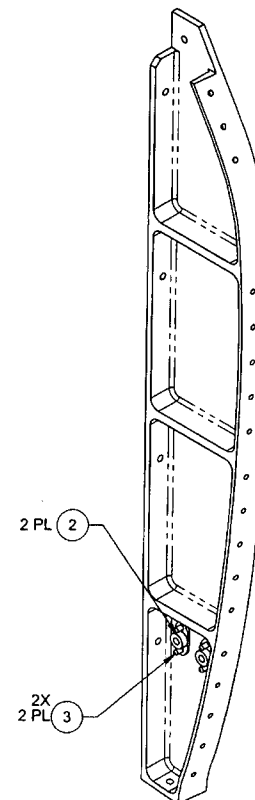
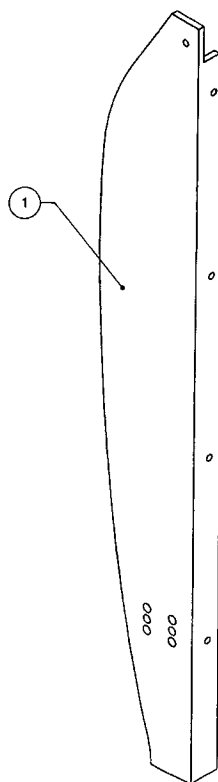


DETAIL B B5-2
NUTPLATE HOLE DETAIL 2 PL
(SCALE 2X)

RELEASED
2012-09-27

DESIGN	AJS	DART AEROSPACE LTD	
DRAWN	AJS	HAWKESBURY, ONTARIO, CANADA	
CHECKED	AP	DRAWING NO.	REV. B
MFG. APPR.	21	D4471	SHEET 2 OF 4
APPROVED	14	TITLE	SCALE
DE APPR.	14	MID RIB ASSEMBLY	NTS
DATE	12.09.10	COPYRIGHT © 2012 BY DART AEROSPACE LTD (THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD)	

ITEM	QTY	P/N	DESCRIPTION
	X	D4471-042	MID RIB ASSY (RH)
1	1	D4471-2	MID RIB (RH)
2	2	MS21069L08	NUTPLATE
3	4	MS20605AD3W4	CSK BLIND RIVET

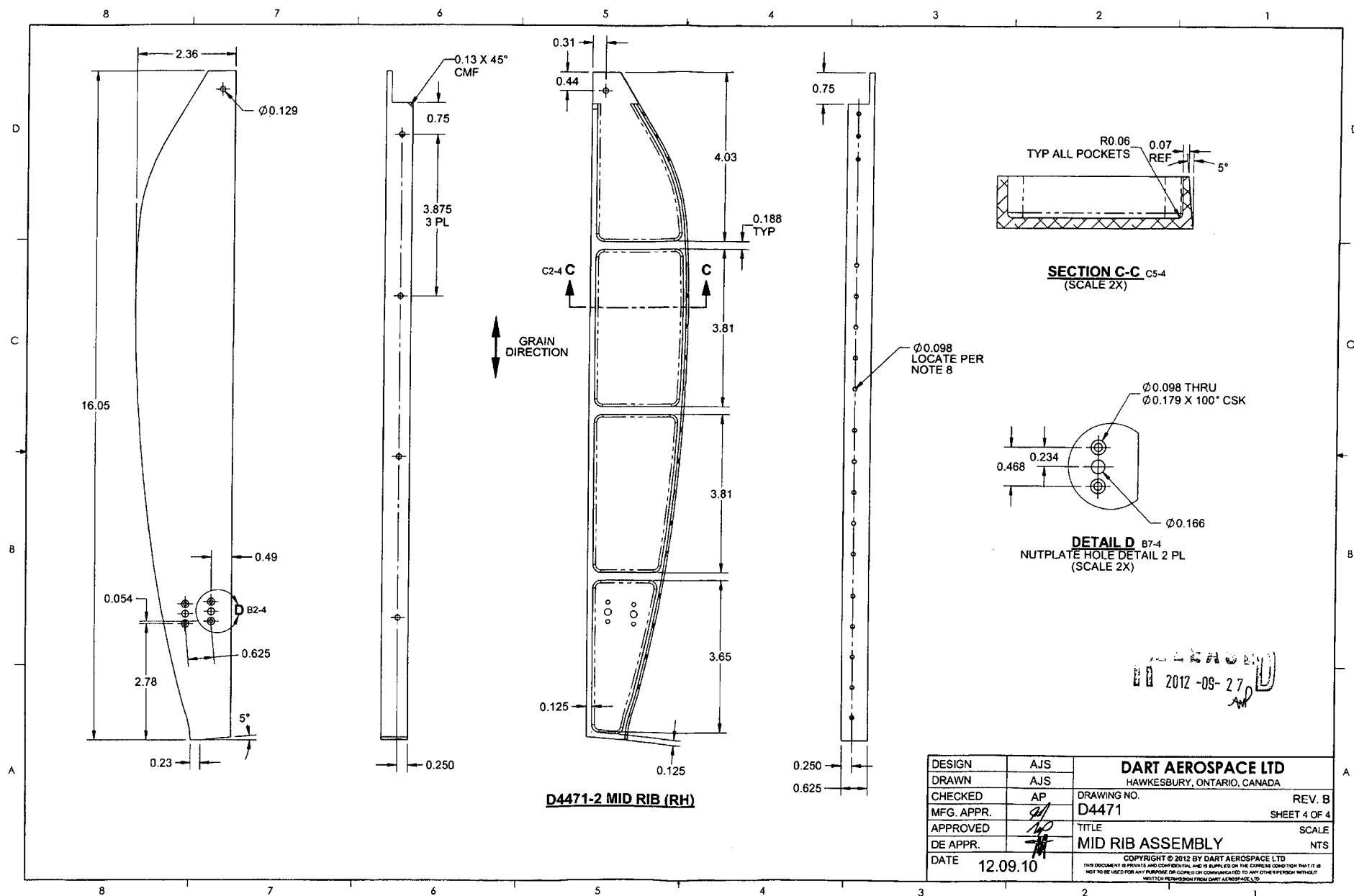


D4471-042 MID RIB ASSY (RH)

NOTES:

- 1) MATERIAL -2: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR
PER QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)
OR QQ-A-200/8 OR AMS-QQ-A-200/8 (OR AMS 4160)
OR ASTM B211 OR ASTM B221
REF DART SPEC M6061T6B
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME TEMPO GREY (4.2.1.3.2) PER DART QSI 005 4.2
(PRIOR TO HARDWARE INSTALLATION)
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.60 lbs
- 8) ALL NON DIMENSIONED FEATURES PER CAD FILE "D4471-2-REVB.STP"
- 9) RAW MATERIAL SURFACE FINISH SUFFICIENT FOR THIS PART
(NOT NECESSARY TO FACE MATERIAL).

DESIGN	AJS	DART AEROSPACE LTD	
DRAWN	AJS	HAWKESBURY, ONTARIO, CANADA	
CHECKED	AP	DRAWING NO.	REV. B
MFG. APPR.	21	D4471	SHEET 3 OF 4
APPROVED	14	TITLE	SCALE
DE APPR.	#	MID RIB ASSEMBLY	NTS
DATE	12.09.10	COPYRIGHT © 2012 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY FORM OR BY ANY MEANS WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	





Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO25516

Purchase Order Date 8/25/2014

PO Print Date 8/25/2014

Page Number 1 of 2

Order From :

VC-GLO001

Ship To : DART AEROSPACE LTD

ARCHER PRECISION INC.
2228 GLADWIN CRESENT
OTTAWA, ON K1B 4S6
CA

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone

613 899 2405

Ship To Contact

Ship To Phone

Ship Via:

FedEx Overnight collect

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

CAD

FOB

EXW - (Ex Works)

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	D4471-1P	Mid Rib, LH	9/12/2014 Yes 9/12/2014		2.00 Each	\$266.33	\$532.66
	MACHINE AS PER DWG D4471 REV. B B122477						
	Line Total:						\$532.66
2	71401-45		9/12/2014 No 9/12/2014		1.00	\$0.00	\$0.00
	Procurement Quality Clauses A005 RIGHT OF ENTRY A008 FIRST ARTICLE INSPECTION (FAI) BY SELLER, (DOCUMENTATION SENT TO DART AEROSPACE) A016 PERSONNEL QUALIFICATION A026 CERTIFICATION OF MATERIAL CONFORMANCE A040 NOTIFICATION OF QUALITY ESCAPE A042 DART NOTIFICATION BY SUPPLIER A043 RETENTION OF QUALITY DOCUMENTS						
	Line Total:						\$0.00

PO Instructions: Fedex Acc#151793240

Note:

8/25/2014



2228 Gladwin Cres.
Ottawa, Ont.
K1B 4S6

Telephone (613) 899-2405
Fax (613) 226-1719

Certificate of Compliance

To:
Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury Ont.
K6A 1K7

3 September 2013

Po Number	Part Number	Quantities
25516	D4471-P	2 – Parts with discrepancy .166 dia holes at .173 dia
		(SEE INSPECTION REPORT)

It is hereby certified that all articles mentioned above are in conformance with the requirements, specification and drawings as listed on customer purchase order number, 25516 issued by Dart Aerospace Inc.


Greg Kumpula
Quality Inspector
Archer Precision Inc.
2228 Gladwin Cress.
Ottawa, Ontario

Material Test Report

Manifest: 262241

Ship To: Metal Supermarkets
2413 Stevenage Dr. Unit #6
Ottawa, ON K1G 3W1

Our Order: **855509 - 1** Cust P.O.: 507-2900
Die: ES05885 Part: 05885-000-120
Alloy Temper: 6061 T6 Description: 1.000 x 4.000
Print Date: 5/29/13

Chemical Composition Range

6061	<u>Si</u>	<u>Fe</u>	<u>Cu</u>	<u>Mn</u>	<u>Mg</u>	<u>Cr</u>	<u>Zn</u>	<u>Ti</u>	<u>OtherEach</u>	<u>OtherTotal</u>
Min	0.40		0.15		0.8	0.04				
Max	0.8	0.7	0.40	0.15	1.2	0.35	0.25	0.15	0.05	0.15

Mechanical Properties

Strength ksi

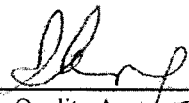
<u>Sample</u> <u>ID</u>	<u>Cast #</u>	<u>Lot #</u>	<u>Test</u> <u>Date</u>	<u>Ultimate</u> <u>Tensile</u>	<u>Yield</u> <u>2% offset</u>	<u>Elongation</u> <u>2" gage length</u>
33005	2BT796	A11	5/21/13	45.41	39.94	18.5

Applicable Specifications ASTM B221-12 QQA200/8
Country of Origin: CANADA

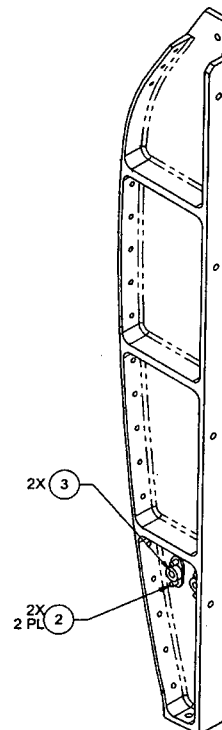
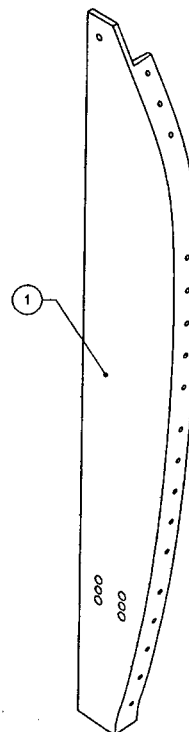
Can Art Aluminum Extrusion Inc. certifies that materials shipped under this order have been inspected and tested in accordance with Aluminum Association and agreed upon customer specifications. Can Art assumes no liability for additional costs which may be incurred during the customer's manufacture and sale of its products, and is subject only to the replacement of any materials not within agreed upon specifications provided written notification is received by Can Art within 30 days from the date of shipment.

Eric Hotte - Tensile Testing

Authorized: _____


Evan Eng, Quality Assurance Mgr.

ITEM	QTY	P/N	DESCRIPTION
	X	D4471-041	MID RIB ASSY (LH)
1	1	D4471-1	MID RIB (LH)
2	4	MS20605AD3W4	CSK BLIND RIVET
3	2	MS21069L08	NUTPLATE



D4471-041 MID RIB ASSY (LH)

NOTES:

- 1) MATERIAL -1: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR
PER QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)
OR QQ-A-200/8 OR AMS-QQ-A-200/8 (OR AMS 4160)
OR ASTM B211 OR ASTM B221
REF DART SPEC M6061T6B
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PRIME TEMPO GREY (4.2 1.3.2) PER DART QSI 005 4.2
(PRIOR TO HARDWARE INSTALLATION)
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.60 lbs
- 8) ALL NON DIMENSIONED FEATURES PER CAD FILE "D4471-1-REV.B.STP"
- 9) RAW MATERIAL SURFACE FINISH SUFFICIENT FOR THIS PART
(NOT NECESSARY TO FACE MATERIAL).

B	ADDED -042 & -2 (RH CONFIGURATION), PRIMER NOTE ADDED. NUTPLATE RIVET WAS MS20426AD3-4	AJS	12.09.10
A	NEW ISSUE	AJS	12.03.05
REV.	DESCRIPTION	BY	DATE
DESIGN	AJS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED	AP	DRAWING NO.	REV. B
MFG. APPR.	21	D4471	SHEET 1 OF 4
APPROVED	14	TITLE	SCALE
DE APPR.	5	MID RIB ASSEMBLY	NTS
DATE	12.09.10	<small>COPYRIGHT © 2012 BY DART AEROSPACE LTD THIS DOCUMENT IS PROPRIETARY AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

RELEASED
2012-09-27



Archer Precision

Short date 9/3/14



Plan Name D4471-041-LH

Part No.: D4471-1 LH

Customer: Dart Aerospace

Rev.: B

u_jobnum * u_jobnum *

u_qtynu * u_qtynu *


Customer PO.: * u_Cuspo *

BSN:

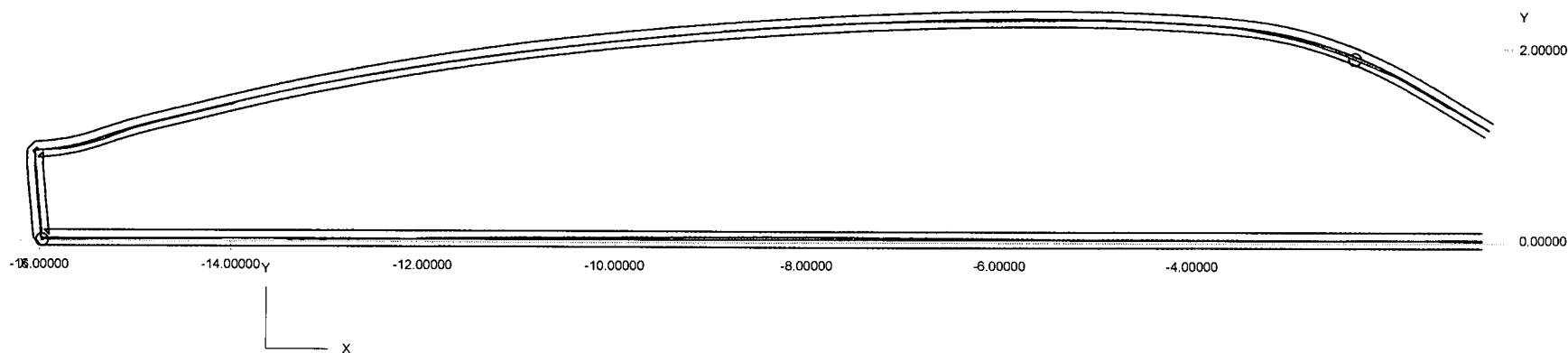
u_mtl * u_mtl *

Incr. Smpl No.: 1

Name	ID	Actual	Nominal	pos Tol	neg Tol	Diff	<-- -->
■ 1 - OA Length	X	-16.05068	-16.05000	0.03000	-0.03000	-0.00068	-
■ 2 - Edge	X	-0.75053	-0.75000	0.03000	-0.03000	-0.00053	-
■ Pocket Depth	Z	-0.50097	-0.50000	0.00500	-0.00500	-0.00097	-
■ 3 - End Angle	A2	-5.00610	-5.00000	0.50000	-0.50000	-0.00610	-
■ 5 - Rib1	X	-4.02947	-4.03010	0.03000	-0.03000	0.00063	-
■ 4 - Rib Thickness	CartDist	0.18790	0.18750	0.01000	-0.01000	0.00040	-
■ 6 - Wall Thickness	CartDist	0.12748	0.12500	0.01000	-0.01000	0.00248	-
■ 7 - Diameter	D	0.12891	0.12850	0.00500	-0.00100	0.00041	---
■ 8 - True Position	Po2d	0.00195	0.00000	0.01000		0.00195	-
	X	-0.43800	-0.43750			-0.00050	
	Y	0.30685	0.30601			0.00084	
■ 9 - Diameter	D	0.17332	0.16600	0.00500	-0.00100	0.00732	0.00232
■ 9 - True Position	Po2d	0.00261	0.00000	0.01000		0.00261	--
	X	-13.03650	-13.03755			0.00105	
	Y	1.10955	1.10877			0.00078	
■ 9b - Diameter	D	0.17340	0.16600	0.00500	-0.00100	0.00740	0.00240
■ 9b - True Position	Po2d	0.00290	0.00000	0.01000		0.00290	--
	X	-12.98175	-12.98308			0.00133	
	Y	0.48673	0.48615			0.00057	
■ 10 - Diameter	D	0.09888	0.09800	0.00400	-0.00100	0.00088	-
■ 10 - True Position	Po2d	0.00260	0.00000	0.01000		0.00260	--
	X	-13.27042	-13.27155			0.00113	
	Y	1.10941	1.10877			0.00064	
■ 11 - Diameter	D	0.12894	0.12850	0.00500	-0.00100	0.00044	---
■ 11 - True Position	Po2d	0.00705	0.00000	0.01000		0.00705	---
	Z	-0.24650	-0.25000			0.00350	
	X	-1.50044	-1.50000			-0.00044	
■ 12 - Diameter	D	0.09874	0.09800	0.00400	-0.00100	0.00074	--
■ 12 - True Position	Po2d	0.00512	0.00000	0.01000		0.00512	---
	Z	-0.25245	-0.25000			-0.00245	
	X	-5.34305	-5.34379			0.00074	
■ Form Outer at .05	CurvForm	0.00323	0.00000	0.00500	-0.00500	0.00323	--
■ Form Pocket 1	CurvForm	0.00132	0.00000	0.00500	-0.00500	0.00132	--
■ Form Pocket 2	CurvForm	0.00194	0.00000	0.00500	-0.00500	0.00194	--
■ Form Pocket 3	CurvForm	0.00167	0.00000	0.00500	-0.00500	0.00167	-
■ Form Pocket 4	CurvForm	0.00147	0.00000	0.00500	-0.00500	0.00147	-


 Calypso 5.6.08		Carl Zeiss		Date Order		September 3, 2014	
Part Number 1		CMM Type CONT_G2		Drawing No.		Department:	
Meas. Plan Name		D4471-041-LH		Operator		Master	
				Signature:			

1: Form Outer at .05

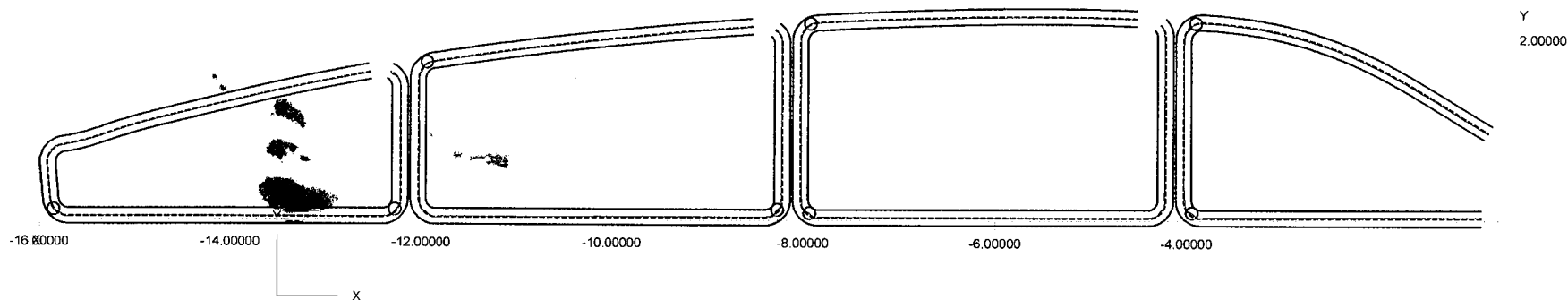


0.1 inch
10 : 1

No	Identifier	Sigma [in]	Form [in]	Number of Points	Lower Tol. [in]	Upper Tol. [in]	MinInd	Min Dev. [in]	MaxInd	Max Dev. [in]	Best Fit	X [in]	Y [in]	Z [in]		X	Y	Z
1	Form Outer at .05	0.00075	0.00323	989	-0.00500	0.00500	939	-0.00185	472	0.00138	Translation	0.00046	-0.00052	0.00000	Rotation	0.00000	0.00000	-0.00054

 Calypso 5.6.08		Carl Zeiss		Date Order	September 3, 2014
Part Number 1	CMM Type CONT_G2	Drawing No.		Department: Operator	Master
Meas. Plan Name D4471-041-LH				Signature:	

2: Form Pocket 1



0.1 inch
10 : 1

No	Identifier	Actual [in]	Tol. [in]	Number of Points	Speed [in/s]	Stylus Radius [in]	F.Typ	L-C	UPR
	Form Pocket 1	0.00000	0.00500	489	0.20	0.00000			
2	Form Pocket 2	0.00000	0.00500	488	0.20	0.00000			
3	Form Pocket 3	0.00000	0.00500	488	0.20	0.00000			
4	Form Pocket 4	0.00000	0.00500	489	0.20	0.00000			